```
=>
Uploading C:\Documents and Settings\jlaul\My Documents\10764989 - photolabile
PG\benzophenone.str

L1      STRUCTURE UPLOADED

=> s l1 sss sam
SAMPLE SEARCH INITIATED 09:28:59 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       16 TO ITERATE

100.0% PROCESSED       16 ITERATIONS                                1 ANSWERS
SEARCH TIME: 00.00.01

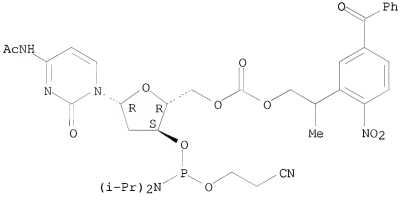
FULL FILE PROJECTIONS:  ONLINE   **COMPLETE**
                        BATCH    **COMPLETE**
PROJECTED ITERATIONS:           80 TO      560
PROJECTED ANSWERS:               1 TO       80

L2            1 SEA SSS SAM L1

=> d l2 scan

L2   1 ANSWERS   REGISTRY  COPYRIGHT 2008 ACS on STN
IN   Cytidine, N-acetyl-2'-deoxy-, 5'-[2-(5-benzoyl-2-nitrophenyl)propyl
     carbonate] 3'-[2-cyanoethyl bis(1-methylethyl)phosphoramidite] (9CI)
MF   C37 H45 N6 O11 P

Absolute stereochemistry.
```




```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


ALL ANSWERS HAVE BEEN SCANNED


=> s l1 sss full
FULL SEARCH INITIATED 09:29:14 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      241 TO ITERATE

100.0% PROCESSED      241 ITERATIONS                               44 ANSWERS
SEARCH TIME: 00.00.01
```

```
L3            44 SEA SSS FUL L1

=> b caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   178.36     178.57

FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 30 Apr 2008  VOL 148 ISS 18
FILE LAST UPDATED: 29 Apr 2008  (20080429/ED)

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=> s l3
L4            20 L3

=> s l4 and py<=2002
      22929873 PY<=2002
L5            13 L4 AND PY<=2002

=> s l5 and (photo? or caged or protect?)
        1572300 PHOTO?
           4566 CAGED
         679039 PROTECT?
L6             0 L5 AND (PHOTO? OR CAGED OR PROTECT?)

=> s l5 and nucleo?
         787140 NUCLEO?
L7             3 L5 AND NUCLEO?

=> s l7 scan
MISSING OPERATOR L7 SCAN
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d l7 scan

L7    3 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
CC   35-5 (Chemistry of Synthetic High Polymers)
```

TI Synthesis of poly(arylene ether ketone)s containing amide side groups via nitro displacement reaction
ST polyether polyketone prepn dinitro monomer diol
IT Polyketones
Polyketones
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyether-; preparation via nitro displacement reaction and properties of poly(arylene ether ketone)s containing amide side groups)
IT Polyethers, preparation
Polyethers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyketone-; preparation via nitro displacement reaction and properties of poly(arylene ether ketone)s containing amide side groups)
IT *220114-44-3P*
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer; preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)
IT 2516-95-2, 5-Chloro-2-nitrobenzoic acid 153088-92-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)
IT 220114-40-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)
IT *220114-47-6P* 220114-50-1P *220114-52-3P* 220114-53-4P
220114-54-5P 220114-55-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation via nitro displacement reaction and properties of poly(arylene ether ketone)s containing amide side groups)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L7 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
CC 25-20 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 22, 23
TI Reactions of organic anions. Part 110. Vicarious *nucleophilic* substitution of hydrogen in nitroarenes with α-substituted nitriles and esters. Direct α-cyanoalkylation and α-carbalkoxyalkylation of nitroarenes
ST vicarious *nucleophilic* substitution nitroarene; cyanoalkylation nitroarene; carbalkoxyalkylation nitroarene; nitroarene cyanoalkylation carbalkoxyalkylation; alkylation cyano carbalkoxy nitroarene; alkanenitrile chloro oxy thio anion; chloroalkanenitrile anion reaction; oxyalkanenitrile anion reaction; thioalkanenitrile anion reaction; alkanecarboxylate thio anion reaction
IT Regiochemistry
(in vicarious *nucleophilic* substitution of hydrogen in nitroarenes with substituted nitriles and esters)
IT Substitution reaction, *nucleophilic*
(vicarious, of hydrogen in nitroarenes with substituted nitriles and esters)
IT Alkylation
(alkoxycarbonyl-, of nitroarenes by vicarious *nucleophilic* substitution of hydrogen with substituted esters)
IT Alkylation

(cyano-, of nitroarenes by vicarious *nucleophilic* substitution of hydrogen with substituted nitriles)

IT 89278-25-1
RL: PROC (Process)
(conversion of, to nitronaphthalenacetonitrile)

IT 72301-66-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and decyanation of)

IT 89278-18-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 89278-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction and acetylation of)

IT 89278-00-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and C-methylation of)

IT 555-21-5P 610-66-2P 2945-08-6P 7599-05-5P 22908-29-8P
29704-38-9P 50712-63-5P 72301-65-6P 72301-67-8P 72301-68-9P
72301-69-0P 72301-70-3P 77158-79-3P 80199-01-5P 81310-40-9P
81327-28-8P 85397-18-8P 86981-07-9P 87081-90-1P 89277-98-5P
89277-99-6P 89278-01-3P 89278-02-4P 89278-03-5P 89278-04-6P
89278-05-7P 89278-06-8P 89278-09-1P 89278-10-4P 89278-11-5P
89278-12-6P 89278-13-7P 89278-14-8P 89278-17-1P 89278-19-3P
89278-20-6P *89278-21-7P* 89278-22-8P 89278-23-9P
89278-24-0P 89278-26-2P 89278-28-4P 89302-15-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 107-14-2 1617-17-0 3598-14-9 5219-61-4 13031-13-5 17277-58-6
27888-12-6 32121-27-0 33695-43-1 35928-65-5 61540-35-0
63006-68-8 70477-21-3 72301-64-5 89278-07-9 89278-08-0
89278-15-9 89278-16-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of nitroarene by)

IT 88-73-3 91-23-6 92-93-3 100-17-4 100-29-8 350-46-9 701-57-5
1493-27-2 3282-56-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, by nitrile anions)

IT 86-57-7 98-95-3, reactions 100-00-5 121-73-3 952-97-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, by nitrile or ester anions)

IT 1144-74-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, ester anions)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L7 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
TI Reactions of organic anions. Part 163. Reactions of nitrobenzophenones

with carbanions containing leaving groups. Vicarious *nucleophilic* substitution of hydrogen versus Darzens or the Wittig-Horner reactions

ST nitrobenzophenone reaction carbanion leaving group; *nucleophilic* substitution nitrobenzophenone; Darzens reaction nitrobenzophenone carbanion; Wittig Horner reaction nitrobenzophenone carbanion

IT Carbanions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzophenones)

IT Ring closure and formation
(Darzens, of nitrobenzophenones with carbanions containing leaving groups)

IT Wittig reaction
(Horner, of nitrobenzophenones with carbanions containing leaving groups)

IT Substitution reaction, *nucleophilic*
(vicarious, in carbanion reactions with nitrobenzophenones)

IT 79482-00-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination of)

IT 119657-21-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 94514-35-9P 94514-36-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylation of)

IT 119657-16-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with di-Ph disulfide)

IT 119657-20-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with nitrobenzophenone)

IT 119657-22-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and substitution reactions of)

IT 41865-47-8P 69709-36-0P 94514-33-7P 94514-34-8P 94514-37-1P
119656-97-2P 119656-98-3P 119656-99-4P 119657-00-0P 119657-01-1P
119657-02-2P 119657-03-3P 119657-04-4P 119657-05-5P 119657-06-6P
119657-07-7P 119657-08-8P 119657-09-9P 119657-10-2P 119657-11-3P
119657-12-4P 119657-13-5P 119657-14-6P 119657-15-7P 119657-17-9P
119657-18-0P 119657-19-1P 119657-23-7P 119657-24-8P 119657-25-9P
119657-26-0P 119679-95-7P *119679-96-8P*
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 882-33-7, Diphenyl disulfide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzylphosphonate derivative)

IT 1144-74-7, p-Nitrobenzophenone 2243-79-0, o-Nitrobenzophenone
2243-80-3, m-Nitrobenzophenone
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carbanions containing leaving groups)

IT 107-14-2 3167-63-3 3598-14-9 5219-61-4 5533-31-3 7205-98-3
13557-25-0 15296-86-3 19169-90-5 31540-74-6 33695-43-1
38066-16-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzophenone)

```
IT   350-46-9, p-Fluoronitrobenzene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with phenyl(tetrahydropyranoxy)acetonitrile)

ALL ANSWERS HAVE BEEN SCANNED


=> b marpat
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    11.56     190.13

FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
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FILE CONTENT: 1961-PRESENT VOL 148 ISS 17 (20080425/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US  20080070287 20 MAR 2008
DE 102006042075 06 MAR 2008
EP      1897532 12 MAR 2008
JP   2008063644 21 MAR 2008
WO   2008035998 27 MAR 2008
GB      2441396 05 MAR 2008
FR      2904973 22 FEB 2008
RU      2320708 27 MAR 2008
CA      2557401 25 FEB 2008

Expanded G-group definition display now available.

Effective December 15th the iteration and answer limits in MARPAT
have increased from 100,000 to 200,000 for both on-line and batch
searches.  For more information on MARPAT search limits, type HELP
SLIMITS at an arrow prompt.

=> d his

     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1              STRUCTURE UPLOADED
L2            1 S L1 SSS SAM
L3           44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4           20 S L3
L5           13 S L4 AND PY<=2002
L6            0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7            3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
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```
=> s l3 sss sam
SAMPLE SEARCH INITIATED 09:30:47 FILE 'MARPAT'
SAMPLE SCREEN SEARCH COMPLETED -     1816 TO ITERATE

100.0% PROCESSED     1816 ITERATIONS                                 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        33913 TO    38727
PROJECTED ANSWERS:            1658 TO     2942

L8           50 SEA SSS SAM L1

=> d l8 scan

L8   50 ANSWERS   MARPAT  COPYRIGHT 2008 ACS on STN
IC   ICM  A61K
CC   27-7 (Heterocyclic Compounds (One Hetero Atom))
     Section cross-reference(s): 1, 63
TI   Preparation of oxoisoindolinylphenylpropanoates and its analogs for the
     treatment of spinal muscular atrophy and other uses
ST   oxoisoindolinylphenylpropanoate prepn spinal muscular atrophy treatment
     SMN expression increase; isoindolinylphenylpropanoate prepn spinal
     muscular atrophy treatment SMN expression increase; EAAT2 expression
     increase oxoisoindolinylphenylpropanoate prepn; antitumor
     oxoisoindolinylphenylpropanoate prepn
IT   Nervous system, disease
        (Huntington's chorea; preparation of oxoisoindolinylphenylpropanoates and
        its analogs for the treatment of spinal muscular atrophy and other
        uses)
IT   Proteins
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (SMN1 (survival motor neuron 1), increasing SMN expression; preparation of
        oxoisoindolinylphenylpropanoates and its analogs for the treatment of
        spinal muscular atrophy and other uses)
IT   Nervous system, disease
        (degeneration; preparation of oxoisoindolinylphenylpropanoates and its
        analogs for the treatment of spinal muscular atrophy and other uses)
IT   Amino acids, biological studies
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (excitatory, increasing the expression of excitatory amino acid
        transporter (EAAT2) in a cell; preparation of oxoisoindolinylphenylpropanoat
        es and its analogs for the treatment of spinal muscular atrophy and
        other uses)
IT   Alzheimer's disease
     Amyotrophic lateral sclerosis
     Anti-Alzheimer's agents
     Anticonvulsants
     Antidiabetic agents
     Antiparkinsonian agents
     Antitumor agents
     Cystic fibrosis
     Diabetes mellitus
     Epilepsy
     Human
     Multiple sclerosis
```

Muscular dystrophy
Neoplasm
Parkinson's disease
Spinal muscular atrophy
Stroke
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT Carboxylic acids, preparation
Esters, preparation
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT Central nervous system, disease
(trauma; preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT 950734-69-7P 950737-41-4P 950738-53-1P 950739-55-6P 950741-77-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT 4778-84-1P 33886-48-5P 36690-95-6P 36691-00-6P 36691-11-9P
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50712-33-9P 50712-34-0P 50712-35-1P 50712-44-2P 50712-46-4P
50712-48-6P 53086-13-8P 53086-14-9P 54627-51-9P 60025-40-3P
62971-07-7P 62971-17-9P 63009-34-7P 63061-93-8P 63610-08-2P
69981-06-2P 75748-96-8P 639857-66-2P 859827-51-3P 865701-39-9P
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950739-04-5P 950739-05-6P 950739-06-7P 950739-07-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT 950739-08-9P 950739-09-0P 950739-10-3P 950739-11-4P 950739-13-6P
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950740-91-7P 950740-92-8P 950740-93-9P 950740-94-0P 950740-95-1P
950740-96-2P 950740-97-3P 950740-98-4P 950740-99-5P 950741-00-1P
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950741-75-0P 950741-76-1P 950741-79-4P 950748-70-6P

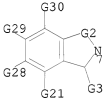
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT 99-88-7, 4-Isopropylaniline 452-86-8, 4-Methylbenzene-1,2-diol 1975-52-6, 2-Methyl-5-nitrobenzoic acid 2417-73-4, Methyl 2-(bromomethyl)benzoate 7499-06-1, 5-Chloro-2-methylbenzoic acid 7547-97-9 19910-33-9, 2-(4-Nitrophenyl)propanoic acid 217493-65-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

IT 7335-32-2P 33632-35-8P 34265-55-9P 56427-54-4P 56427-55-5P 89278-22-8P 124358-24-3P 359629-91-7P 595570-58-4P 724791-20-2P 924871-41-0P 950741-84-1P 950741-85-2P 950741-86-3P 950741-87-4P 950741-88-5P 950741-90-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of oxoisoindolinylphenylpropanoates and its analogs for the treatment of spinal muscular atrophy and other uses)

MSTR 1

G1 = 7



G21 = 178

G22 = Ph (opt. substd.)
G26 = alkoxy <containing 1-4 C>
G29 = alkyl <containing 1-8 C>
(opt. substd. by 1 or more G26)
G30 = NO2
Patent location: claim 1
Note: substitution is restricted
Note: dihydro and tetrahydro analogs of G1 thieno-,

pyrido-, and cyclohexano-fused rings also claimed
Note: additional fused ring formation also claimed

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L8 50 ANSWERS MARPAT COPYRIGHT 2008 ACS on STN
NCL 514352000
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 63
TI Preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists
ST biarylcarboxylate prepn bradykinin B1 antagonist inverse agonist analgesic antiinflammatory
IT Bradykinin receptors
RL: B5U (Biological study, unclassified); BIOL (Biological study)
(B1; preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists for treatment and prevention of pain and inflammation)
IT Analgesics
Anti-inflammatory agents
Human
Inflammation
Pain
(preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists for treatment and prevention of pain and inflammation)
IT 890300-28-4P 890300-32-0P 890301-63-0P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists for treatment and prevention of pain and inflammation)
IT 888486-59-7P 888486-60-0P 890300-23-9P 890300-25-1P 890300-27-3P
890300-29-5P 890300-31-9P 890300-34-2P 890300-36-4P 890300-37-5P
890300-38-6P 890300-39-7P 890300-40-0P 890300-41-1P 890300-42-2P
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890300-63-7P 890300-64-8P 890300-65-9P 890300-66-0P 890300-67-1P
890300-68-2P 890300-69-3P 890300-70-6P 890300-71-7P 890300-72-8P
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890300-89-7P 890300-90-0P 890300-91-1P 890300-92-2P 890300-93-3P
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890301-19-6P 890301-20-9P 890301-21-0P 890301-22-1P 890301-23-2P
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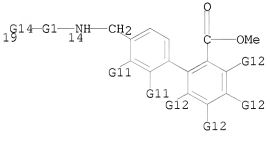
890301-65-2P 890301-67-4P 890302-76-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists for treatment and prevention of pain and inflammation)

IT 98-09-9, Benzenesulfonyl chloride 98-88-4, Benzoyl chloride 767-00-0, 4-Cyanophenol 4518-10-9, Methyl 3-aminobenzoate 4548-45-2, 2-Chloro-5-nitropyridine 14432-16-7, 2-Chloro-4-nitropyridine N-oxide 15570-12-4, 3-Methoxybenzenethiol 19721-22-3, 3-Mercapto-1-propanol 23056-33-9, 2-Chloro-4-methyl-5-nitropyridine 27578-60-5, 1-(2-Aminoethyl)piperidine 33252-28-7, 6-Chloronicotinonitrile 39856-50-3, 5-Bromo-2-nitropyridine 73781-91-6, Methyl 6-chloronicotinate 216394-05-7, 3-Bromo-2-chloropyridine-5-sulfonyl chloride 887278-70-8 890301-68-5 890301-69-6 890301-70-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of substituted biaryl-carboxylates as bradykinin B1 antagonists or inverse agonists for treatment and prevention of pain and inflammation)

MSTR 1



G1 = phenylene (opt. substd.)
G14 = 201

C(O)G31
201

G21 = NO2 / CO2H
G31 = Ph (opt. substd. by (1-3) G21)
Patent location: claim 1

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s l3 sss full
FULL SEARCH INITIATED 09:31:14 FILE 'MARPAT'
FULL SCREEN SEARCH COMPLETED - 38150 TO ITERATE

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 99.4% PROCESSED    37922 ITERATIONS                          2120 ANSWERS

100.0% PROCESSED    38150 ITERATIONS                          2134 ANSWERS
SEARCH TIME: 00.00.23

L9          2134 SEA SSS FUL L1

=> b caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    65.42     255.55

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=> s l9
L10         2134 L9

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                (AD<=20030221)
L11         1571 L10 AND AD<=20030221

=> d his

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L3           44 S L1 SSS FULL

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L6            0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7            3 S L5 AND NUCLEO?
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L9           2134 S L3 SSS FULL

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L10          2134 S L9
L11          1571 S L10 AND AD<=20030221

=> s l11 and (PHOTO? OR CAGED OR PROTECT?)
       1572300 PHOTO?
          4566 CAGED
        679039 PROTECT?
L12           215 L11 AND (PHOTO? OR CAGED OR PROTECT?)

=> s l12 and nucleo?
        787140 NUCLEO?
L13             4 L12 AND NUCLEO?

=> d l13 scan

L13   4 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
IC    ICM  C07H019-00
INCL 536028550
CC    33-9 (Carbohydrates)
TI    Catalytic stereoselective glycosylation process for preparing
      2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides
ST    fluoro nucleoside stereoselective prepn; stereoselective
      glycosylation fluoro deoxy ribofuranose catalytic
IT    Nucleosides, preparation
      RL: SPN (Synthetic preparation); PREP (Preparation)
         (catalytic stereoselective glycosylation process for preparing
         2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT    Glycosidation catalysts
         (stereoselective, acid salts; catalytic stereoselective glycosylation
         process for preparing 2'-deoxy-2',2'-difluoronucleosides and
         2'-deoxy-2'-fluoronucleosides)
IT    Glycosidation
         (stereoselective, catalytic stereoselective glycosylation process for
         preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-
         fluoronucleosides)
IT    76-05-1D, salts   2794-60-7, Barium trifluoromethanesulfonate   2926-27-4,
      Potassium trifluoromethanesulfonate   7601-90-3D, Perchloric acid, salts
      7697-37-2D, Nitric acid, salts   7727-43-7, Barium sulfate   7778-80-5,
      Sulfuric acid dipotassium salt, uses   10294-54-9, Cesium sulfate
      29420-49-3   35895-70-6, Tetrabutylammonium trifluoromethanesulfonate
      41524-04-3, Cesium trifluoromethanesulfonate
      RL: CAT (Catalyst use); USES (Uses)
         (catalytic stereoselective glycosylation process for preparing
         2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT    71-30-7, Cytosine   134877-42-2   134877-43-3
      RL: RCT (Reactant); RACT (Reactant or reagent)
         (catalytic stereoselective glycosylation process for preparing
         2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT    18037-10-0P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (catalytic stereoselective glycosylation process for preparing
```

2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT 20227-41-2P 56632-83-8P 103884-98-6P 134790-39-9P 134790-40-2P 170980-98-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(catalytic stereoselective glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT 75-05-8, Acetonitrile, uses 100-66-3, uses 107-12-0, Propionitrile 110-71-4, Glyme 123-91-1, Dioxane, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; catalytic stereoselective glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L13 4 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM G03C001-015
ICS G03C001-035; G03C001-06; G03C001-08; G03C001-09; G03C001-34
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
TI Manufacture of silver halide *photographic* emulsion containing selenium-doped grains with high thermal stability
ST selenium compd dopant *photog* emulsion; selenocyanide dopant silver halide emulsion; thiazolium benzo additive *photog* material
IT *Photographic* emulsions
Photographic sensitizers
(manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 3425-46-5, Potassium selenocyanate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(dopant; manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 333-20-0, Potassium thiocyanate 20792-41-0, Tripotassium hexacyanoiridate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 2786-31-4 16407-55-9 95537-84-1 178156-23-5 178156-25-7
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(*nucleophilic* agent; manufacture of silver halide *photog* . emulsion containing selenium-doped grains with high thermal stability)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L13 4 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C12N
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 63
TI Preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors
ST quinoline naphthyridine azanaphthalenyl ketone HIV integrase inhibitor prepn
IT Antibiotics
Immunomodulators
Vaccines

(combination pharmaceutical; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT AIDS (disease)
Anti-AIDS agents
Anti-infective agents
Antiviral agents
Human
(preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT 422550-66-1P, 1-(3-Benzylphenyl)-1-(8-hydroxyquinolin-7-yl)methanone 422550-70-7P, 1-(3-Benzylphenyl)-1-(8-hydroxy-4-methylquinolin-7-yl)methanone 422550-75-2P 422550-76-3P, 1-(3-Benzylphenyl)-1-(8-hydroxy-5-methylquinolin-7-yl)methanone 422550-80-9P, [3-Benzyl-5-(1H-1,2,4-triazol-1-ylmethyl)phenyl](5-chloro-8-hydroxyquinolin-7-yl)methanone 422550-90-1P, 1-(3-Benzyl-5-((imidazol-1-yl)methyl)phenyl)-1-(5-chloro-8-hydroxyquinolin-7-yl)methanone 422550-91-2P, 1-(4-Benzylpyridin-2-yl)-1-(8-hydroxyquinolin-7-yl)methanone 422550-92-3P, 1-(3-Benzylphenyl)-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422550-94-5P, 1-[3-Benzyl-5-(1,1-dioxoisothiazolidin-2-ylmethyl)phenyl]-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422550-96-7P, 1-[3-Benzyl-5-(morpholin-4-ylmethyl)phenyl]-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422550-98-9P, 1-(3-Benzyl-5-((piperidin-1-yl)methyl)phenyl)-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422550-99-0P, 1-[3-Benzyl-5-(4-methylpiperazin-1-ylmethyl)phenyl]-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422551-00-6P, 1-[3-Benzyl-5-[1-(8-hydroxy[1,6]naphthyridin-7-yl)methanoyl]benzyl]-1H-pyridin-2-one 422551-01-7P, 3-[3-Benzyl-5-[(8-hydroxy-1,6-naphthyridin-7-yl)carbonyl]benzyl]-1-methylpyrimidine-2,4-(1H,3H)-dione 422551-02-8P, 1-[3-Benzyl-5-(tetrazol-1-ylmethyl)phenyl]-1-(8-hydroxy[1,6]naphthyridin-7-yl)methanone 422551-03-9P 422551-04-0P 422551-06-2P, 3-[3-Benzyl-5-[1-(8-hydroxy[1,6]naphthyridin-7-yl)methanoyl]benzyl]-3H-pyrimidin-4-one 422551-07-3P, 1-[3-Benzyl-5-[1-(8-hydroxy[1,6]naphthyridin-7-yl)methanoyl]benzyl]pyrrolidin-2-one 422551-09-5P, N-[3-Benzyl-5-[1-(8-hydroxy[1,6]naphthyridin-7-yl)methanoyl]benzyl]formamide 422551-11-9P, N-[3-Benzyl-5-[1-(8-hydroxy[1,6]naphthyridin-7-yl)methanoyl]benzyl]-N-methylformamide 422551-12-0P, 1-(8-Hydroxy[1,6]naphthyridin-7-yl)-1-(3-pyrazol-1-ylmethyl-5-pyridin-2-ylmethylphenyl)methanone 422551-14-2P, 1-(8-Hydroxy[1,6]naphthyridin-7-yl)-1-[3-((1,1-dioxoisothiazolidin-2-yl)methyl)-5-((pyridin-2-yl)methyl)phenyl]methanone 422551-15-3P 422551-16-4P 422551-17-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT 130-26-7P, 8-Hydroxy-7-iodo-5-chloroquinoline 3846-73-9P, 4-Methylquinolin-8-ol 5541-67-3P, 8-Hydroxy-5-methylquinoline 7175-09-9P, 8-Hydroxy-7-bromo-5-methylquinoline 7259-53-2P, 4-Benzylpyridine N-oxide 13019-32-4P, 7-Bromoquinolin-8-ol 126403-57-4P, 8-Methoxy-5-methylquinoline 193204-90-9P, 4-Benzylpyridine-2-carbonitrile 193204-91-0P, 4-Benzylpyridine-2-carboxylic acid methyl ester 422550-67-2P, 7-Bromo-8-(2-methoxyethoxymethoxy)quinoline 422550-68-3P, (3-Benzylphenyl)[8-[(2-methoxyethoxy)methoxy]quinolin-7-yl]methanone 422550-69-4P, N-Methyl-N-methoxy(3-benzyl)benzenecarboxamide 422550-71-8P, 8-Hydroxy-4-methylquinoline-7-carboxylic acid 422550-72-9P, Methyl

8-hydroxy-4-methylquinoline-7-carboxylate 422550-73-0P, Methyl 8-[(2-methoxyethoxy)methoxy]-4-methylquinoline-7-carboxylate 422550-74-1P, (3-Benzylphenyl)[8-[(2-methoxyethoxy)methoxy]-4-methylquinolin-7-yl]methanone 422550-77-4P, N-Methyl-N-methoxy-3-(benzoyl)benzenecarboxamide 422550-78-5P, 8-((2-Methoxyethoxy)methoxy)-7-bromo-5-methylquinoline 422550-79-6P, 1-(3-Benzylphenyl)-1-[8-((2-methoxyethoxy)methoxy)-5-methylquinolin-7-yl]methanone 422550-81-0P 422550-82-1P 422550-83-2P, 3-Benzoyl-5-(bromomethyl)-N-methoxy-N-methylbenzamide 422550-84-3P, 3-Benzoyl-N-methoxy-N-methyl-5-(1H-1,2,4-triazol-1-ylmethyl)benzamide 422550-85-4P, 3-Benzyl-N-methoxy-N-methyl-5-(1H-1,2,4-triazol-1-ylmethyl)benzamide 422550-86-5P, 3-Benzyl-5-(1H-1,2,4-triazol-1-ylmethyl)benzaldehyde 422550-87-6P, 8-((2-Methoxyethoxy)methoxy)-7-iodo-5-chloroquinoline 422550-88-7P, [3-Benzyl-5-(1H-1,2,4-triazol-1-ylmethyl)phenyl][5-chloro-8-[(2-methoxyethoxy)methoxy]quinolin-7-yl]methanol 422550-89-8P, [3-Benzyl-5-(1H-1,2,4-triazol-1-ylmethyl)phenyl][5-chloro-8-[(2-methoxyethoxy)methoxy]quinolin-7-yl]methanone
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT 52350-85-3, HIV Integrase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of HIV; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT 75-12-7, Formamide, reactions 78-94-4, Methyl vinyl ketone, reactions 100-58-3, Phenylmagnesium bromide 107-02-8, Acrolein, reactions 109-01-3 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions 120-71-8, 2-Methoxy-5-methylaniline 123-39-7, N-Methylformamide 130-16-5, 8-Hydroxy-5-chloroquinoline 142-08-5, 2-Hydroxypyridine 148-24-3, 8-Hydroxyquinoline, reactions 288-13-1, Pyrazole 288-88-0, 1H-1,2,4-Triazole 288-94-8, 1H-Tetrazole 499-49-0, 5-Methylisophthalic acid 579-18-0, 3-Benzoylbenzoic acid 615-77-0, 1-Methyluracil 1335-05-3, Pyrimidone 2116-65-6, 4-Benzylpyridine 3970-21-6, Methoxyethoxymethyl chloride 27798-39-6, 1-Benzyl-3-bromobenzene 29191-52-4, Anisidine 422550-93-4, 3-[[[2-(3-Benzylphenyl)-2-oxoethyl]benzenesulfonylamino]methyl]pyridine-2-carboxylic acid ethyl ester 422550-95-6, 3-[[[2-[3-Benzyl-5-(1,1-dioxoisothiazolidin-2-ylmethyl)phenyl]-2-oxoethyl]benzyloxycarbonylamino]methyl]pyridine-2-carboxylic acid ethyl ester 422550-97-8 422551-05-1 422551-08-4 422551-13-1 422551-18-6, 6-[2-(4-Benzylpyridin-2-yl)-2-oxoethyl]pyrrolo[3,4-b]pyridine-5,7-dione
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

IT 425435-29-6 425435-30-9
RL: PRP (Properties)
(unclaimed *nucleotide* sequence; preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L13 4 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C07H019-073
INCL 536028100
CC 33-9 (Carbohydrates)
TI Stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides

ST stereoselective fusion glycosylation; deoxy fluoro *nucleoside*
IT *Nucleosides*, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(deoxyribo-, stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT Glycosidation
(stereoselective, stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT 66-22-8, Uracil, reactions 71-30-7, Cytosine 18027-23-1, Bis-trimethylsilyl-N-acetylcytosine 134877-42-2 134877-43-3 153011-93-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT 10457-14-4P, Bis-trimethylsilyluracil 18037-10-0P 134790-39-9P 134790-40-2P 143157-23-7P 143157-24-8P 143157-26-0P 143157-27-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)
IT 95058-81-4P 163521-56-0P 163521-57-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides)

ALL ANSWERS HAVE BEEN SCANNED

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YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:353578 CAPLUS <<LOGINID::20080430>>
DOCUMENT NUMBER: *136:386029*
TITLE: Preparation of aza- and polyaza-naphthalenyl ketones useful as HIV integrase inhibitors
INVENTOR(S): Zhuang, Linghang; Wai, John S.; Payne, Linda S.; Young, Steven D.; Fisher, Thorsten E.; Embrey, Mark; Guare, James P.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 189 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036734	A2	20020510	WO 2001-US42553	20011009 <--
WO 2002036734	A3	20020711		

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

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EP 1333831	A2	20030813	EP 2001-990637	20011009	<--
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JP 2004513134	T	20040430	JP 2002-539480	20011009	<--
US 20050010048	A1	20050113	US 2003-398929	20030717	
PRIORITY APPLN. INFO.:			US 2000-239732P	P 20001012	
			WO 2001-US42553	W 20011009	

OTHER SOURCE(S): MARPAT 136:386029

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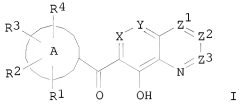

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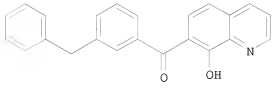

II

AB Title compds. I [A = Ph, Ph fused to a carbocycle to form a fused carbocyclic ring system, heterocycle, A is connected by a ring carbon to the exocyclic carbonyl, and is substituted by R1-4; X = N, CQ1; Y = N, CQ2, provided that X and Y are not both N; Z1 = N, CQ3; Z2 = N, CQ4; Z3 = N, CH; Q1-4 = H, alkyl, fluoroalkyl, OH, (fluoro)alkoxy, halo, CN, etc.; R1-2 H, (fluoro)alkyl, (fluoro)alkoxy, OH, halo, NO2, CN, etc.; R3-4 = H, halo, CN, NO2, OH, (fluoro)alkyl, (fluoro)alkoxy, etc. with some provisions] were prepared For instance, 7-bromoquinolin-8-ol (preparation given) was *protected* as the MEM ether and acylated with N-methyl-N-methoxy-3-(benzyl)benzenecarboxamide (preparation given; THF, t-BuLi, -74°C) to give (3-benzylphenyl)[8-[(2-methoxyethoxy)methoxy]quinolin-7-yl]methanone. This intermediate was deprotected with TFA and purified by reverse phase HPLC to yield II. Selected example compds. had IC50 < 100 μM for HIV integrase. I are useful in the prevention or treatment of infection by HIV and the treatment or the delay in the onset of AIDS optionally in combination with

other antivirals, immunomodulators, antibiotics or vaccines.

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:472629 CAPLUS <<LOGINID::20080430>>
DOCUMENT NUMBER: *125:127622*
TITLE: Manufacture of silver halide *photographic* emulsion containing selenium-doped grains with high thermal stability
INVENTOR(S): Haraguchi, Nobuyuki; Ikeda, Hideo; Mifune, Hiroyuki; Kojima, Tetsuo
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 42 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08122949	A	19960517	JP 1994-282435	19941024 <--
US 5641619	A	19970624	US 1995-547132	19951024 <--
PRIORITY APPLN. INFO.:			JP 1994-282435 A	19941024
OTHER SOURCE(S):	MARPAT 125:127622			

GI For diagram(s), see printed CA Issue.
AB The claimed method for Ag halide *photog.* emulsion comprises doping 1.0 + 10-8-1.0 + 10-6 mol/m2 grain surface of Se into the crystals at a stage after addition of 10-49% of AgNO3 to the crystallizing mixture The emulsion may further contain a *nucleophilic* compound I (R1 = H, alkyl; R2 = H, alkyl, alkenyl, alkynyl, alkoxy, electron-attractive group; n = 1-4; Z = benzo when m = 1, and R2 is substituted on thiazole ring when m = 0; R3 = alkyl, aralkyl, alkenyl, alkynyl; X- = anion). It has high sensitivity and good stability upon high temperature storage. The emulsions in the highest speed unit layers of a color reversal film were prepared by adding KSeCN as the dopant and 3-methylbenzothiazolium iodide (*nucleophilic* agent) during crystallization stage.

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:690262 CAPLUS <<LOGINID::20080430>>
DOCUMENT NUMBER: *123:340765*
TITLE: Catalytic stereoselective glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides
INVENTOR(S): Kjell, Douglas P.
PATENT ASSIGNEE(S): Eli Lilly and Co., USA
SOURCE: U.S., 14 pp. Cont.-in-part of U.S. Ser. No. 902, 112, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5426183	A	19950620	US 1993-44312	19930407 <--
AU 9341355	A	19931223	AU 1993-41355	19930618 <--

AU 659009	B2	19950504			
CA 2098881	A1	19931223	CA 1993-2098881	19930621	<--
CA 2098881	C	20050607			
NO 9302288	A	19931223	NO 1993-2288	19930621	<--
NO 180235	B	19961202			
NO 180235	C	19970312			
HU 64358	A2	19931228	HU 1993-1822	19930621	<--
EP 577303	A1	19940105	EP 1993-304817	19930621	<--
EP 577303	B1	19971001			
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BR 9302434	A	19940216	BR 1993-2434	19930621	<--
JP 06157570	A	19940603	JP 1993-149130	19930621	<--
JP 3313191	B2	20020812			
IN 177576	A1	19970208	IN 1993-CA344	19930621	<--
PL 172348	B1	19970930	PL 1993-299415	19930621	<--
AT 158799	T	19971015	AT 1993-304817	19930621	<--
ES 2107624	T3	19971201	ES 1993-304817	19930621	<--
FI 108643	B1	20020228	FI 1993-2869	19930621	<--
HU 223837	B1	20050228	HU 2002-1196	19930621	<--

PRIORITY APPLN. INFO.:	US 1992-902112	B2	19920622
	US 1992-902135	A	19920622
	US 1992-902150	A	19920622
	US 1992-902302	A	19920622
	US 1992-902312	A	19920622
	US 1992-902313	A	19920622
	US 1993-44309	A	19930407
	US 1993-44312	A	19930407
	US 1993-44315	A	19930407
	US 1993-44343	A	19930407
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	US 1993-44996	A	19930407

OTHER SOURCE(S): CASREACT 123:340765; MARPAT 123:340765

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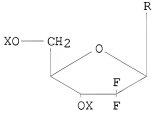

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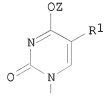

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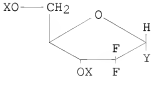

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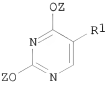

IV

AB A catalytic stereoselective glycosylation process is claimed for preparing β-anomer enriched *nucleoside* of the formula I wherein each X is independently selected from hydroxy *protecting* groups and R' is a *nucleobase*, e.g., II, R1 is selected from the group consisting of hydrogen, C1-C7 alkyl and halo; Z is a hydroxy *protecting* group, comprising reacting α-anomer 2,2-difluorocarbohydrate in an anomer ratio of greater than 1:1 α to β of the formula III wherein Y is selected from the group consisting of optionally substituted C1-C7 alkylsulfonyloxy and optionally substituted arylsulfonyloxy, where the substituents can be one or two groups selected from cyano, halo, carboalkoxy, toluoyl, nitro, alkoxy, C1-C7 alkyl, and di(C1-C7 alkyl)amino, aryl is Ph or naphthyl, and X is as defined above; with at least 3 molar equivalents of a *nucleobase* derivative, R", selected from the group consisting of, e.g., IV, at a temperature ranging from about 50° to about 100°; in an inert solvent; and in the presence of a catalyst selected from the group consisting of the potassium, barium, cesium, and trialkylammonium salts of trifluoromethanesulfonic acid, nonafluorobutanesulfonic acid, sulfuric acid, perchloric acid, nitric acid, and trifluoroacetic acid. Thus, e.g., stereoselective glycosylation of III (X = benzoyl, Y = methanesulfonate) with bis(trimethylsilyl)cytosine in presence of cesium sulfate afforded a 24% yield of the corresponding β-anomer-enriched I, with β:α = 14.9:1, vs. a 77% yield with β:α = 3.4:1 without catalyst.

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	1995:586496 CAPLUS <<LOGINID::20080430>>
DOCUMENT NUMBER:	*123:9874*
TITLE:	Stereoselective fusion glycosylation process for preparing 2'-deoxy-2',2'-difluoronucleosides and 2'-deoxy-2'-fluoronucleosides
INVENTOR(S):	Chou, Ta Sen
PATENT ASSIGNEE(S):	Eli Lilly and Co., USA
SOURCE:	U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 902,312. CODEN: USXXAM
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	8
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5401838	A	19950328	US 1993-44343	19930407 <--
US 5371210	A	19941206	US 1992-902312	19920622 <--
AU 9341355	A	19931223	AU 1993-41355	19930618 <--
AU 659009	B2	19950504		
CA 2098881	A1	19931223	CA 1993-2098881	19930621 <--
CA 2098881	C	20050607		
NO 9302288	A	19931223	NO 1993-2288	19930621 <--
NO 180235	B	19961202		
NO 180235	C	19970312		
HU 64358	A2	19931228	HU 1993-1822	19930621 <--
EP 577303	A1	19940105	EP 1993-304817	19930621 <--
EP 577303	B1	19971001		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
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JP 06157570	A	19940603	JP 1993-149130	19930621 <--

JP 3313191	B2	20020812			
PL 172348	B1	19970930	PL 1993-299415		19930621 <--
AT 158799	T	19971015	AT 1993-304817		19930621 <--
ES 2107624	T3	19971201	ES 1993-304817		19930621 <--
FI 108643	B1	20020228	FI 1993-2869		19930621 <--
CZ 291165	B6	20030115	CZ 1993-1233		19930621 <--
SG 94686	A1	20030318	SG 1996-7939		19930621 <--
HU 223837	B1	20050228	HU 2002-1196		19930621 <--
PRIORITY APPLN. INFO.:			US 1992-902312	A2	19920622
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			US 1992-902302	A	19920622
			US 1992-902313	A	19920622
			US 1993-44309	A	19930407
			US 1993-44312	A	19930407
			US 1993-44315	A	19930407
			US 1993-44343	A	19930407
			US 1993-44345	A	19930407
			US 1993-44996	A	19930407

OTHER SOURCE(S): CASREACT 123:9874; MARPAT 123:9874
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A stereoselective fusion glycosylation process for preparing a β-anomer enriched *nucleoside* of the formula I wherein each X is independently selected from hydroxy *protecting* groups and R' is a *nucleobase* selected from the group consisting of e.g., II-IV wherein R1 is selected from the group consisting of hydrogen C1 -C7 alkyl arid halo; R2 is selected from the group consisting of hydrogen, C1 -C7 alkyl and halo; Z is a hydroxy *protecting* group and W is an amino *protecting* group; comprising reacting α-anomer 2,2-difluorocarbohydrate in an anomer ratio of greater than 1:1 α to β of the formula V wherein Y is selected from the group consisting of C1 -C7 alkylsulfonyloxy, arylsulfonyloxy, substituted C1 -C7 alkylsulfonyloxy and substituted arylsulfonyloxy and X is as defined above; with at least 3 molar equivalents of a *nucleobase* derivative R" selected from the group consisting of, e.g., VI-VIII wherein R1, R2, Z and W are as defined above; at a temperature ranging from about 100° to about 160° in the absence of a catalyst and a solvent. Thus, e.g., 400 mg of 2-deoxy-2,2-difluoro-D-ribofuranosyl-3,5-dibenzoyl-1-α-methanesulfonate, dissolved in 2 mL of xylenes, were added to molten bis(trimethylsilyl)cytosine (prepared by combining 292 mg of cytosine with 2 mL of hexamethyldisilazane, 11 mg of ammonium sulfate and 5 mL of xylenes and refluxing the solution for one hour to form a homogeneous solution, then removing the excess xylenes and hexamethyldisilazane) and the xylenes were removed; the temperature of the reaction mixture was maintained at 160° for 15 min.; the α to β anomeric ratio of blocked *nucleoside* product was 1:1.3.

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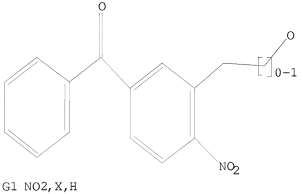


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G1 NO2,X,H
G2 G1,CN,MeO,Ak


Structure attributes must be viewed using STN Express query preparation.


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FULL ESTIMATED COST                                    23.68     279.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                    -3.20      -3.20

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:33:40 ON 30 APR 2008
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LOGINID:ssptajsl1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 09:35:09 ON 30 APR 2008
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COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                23.68     279.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                -3.20      -3.20

=> s l11 and photo?
      1572300 PHOTO?
L14         128 L11 AND PHOTO?

=> s l14 and nucleo?
       787140 NUCLEO?
L15           1 L14 AND NUCLEO?

=> d l15 ti

L15  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Manufacture of silver halide photographic emulsion containing
     selenium-doped grains with high thermal stability


=> logoff hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                29.24     284.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                -3.20      -3.20

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:36:05 ON 30 APR 2008

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PASSWORD:
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SESSION RESUMED IN FILE 'CAPLUS' AT 09:36:44 ON 30 APR 2008
FILE 'CAPLUS' ENTERED AT 09:36:44 ON 30 APR 2008
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    29.24     284.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.20      -3.20

=> d his

     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1             STRUCTURE UPLOADED
L2               1 S L1 SSS SAM
L3              44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4              20 S L3
L5              13 S L4 AND PY<=2002
L6               0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7               3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
L8              50 S L3 SSS SAM
L9            2134 S L3 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:31:54 ON 30 APR 2008
L10           2134 S L9
L11           1571 S L10 AND AD<=20030221
L12            215 S L11 AND (PHOTO? OR CAGED OR PROTECT?)
L13              4 S L12 AND NUCLEO?
L14            128 S L11 AND PHOTO?
L15              1 S L14 AND NUCLEO?

=> s l5 and ?nucleo?
          903034 ?NUCLEO?
L16              3 L5 AND ?NUCLEO?

=> d l16 scan

L16   3 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
CC    35-5 (Chemistry of Synthetic High Polymers)
TI    Synthesis of poly(arylene ether ketone)s containing amide side groups via
      nitro displacement reaction
ST    polyether polyketone prepn dinitro monomer diol
IT    Polyketones
      Polyketones
      RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
         (polyether-; preparation via nitro displacement reaction and properties of
         poly(arylene ether ketone)s containing amide side groups)
```

IT Polyethers, preparation
Polyethers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyketone-; preparation via nitro displacement reaction and properties of poly(arylene ether ketone)s containing amide side groups)

IT *220114-44-3P*
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer; preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)

IT 2516-95-2, 5-Chloro-2-nitrobenzoic acid 153088-92-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)

IT 220114-40-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation dinitro monomer for synthesis of poly(arylene ether ketone)s containing amide side groups)

IT *220114-47-6P* 220114-50-1P *220114-52-3P* 220114-53-4P
220114-54-5P 220114-55-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation via nitro displacement reaction and properties of poly(arylene ether ketone)s containing amide side groups)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L16 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
CC 25-20 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 22, 23
TI Reactions of organic anions. Part 110. Vicarious *nucleophilic* substitution of hydrogen in nitroarenes with α-substituted nitriles and esters. Direct α-cyanoalkylation and α-carbalkoxyalkylation of nitroarenes
ST vicarious *nucleophilic* substitution nitroarene; cyanoalkylation nitroarene; carbalkoxyalkylation nitroarene; nitroarene cyanoalkylation carbalkoxyalkylation; alkylation cyano carbalkoxy nitroarene; alkanenitrile chloro oxy thio anion; chloroalkanenitrile anion reaction; oxyalkanenitrile anion reaction; thioalkanenitrile anion reaction; alkanecarboxylate thio anion reaction
IT Regiochemistry
(in vicarious *nucleophilic* substitution of hydrogen in nitroarenes with substituted nitriles and esters)

IT Substitution reaction, *nucleophilic*
(vicarious, of hydrogen in nitroarenes with substituted nitriles and esters)

IT Alkylation
(alkoxycarbonyl-, of nitroarenes by vicarious *nucleophilic* substitution of hydrogen with substituted esters)

IT Alkylation
(cyano-, of nitroarenes by vicarious *nucleophilic* substitution of hydrogen with substituted nitriles)

IT 89278-25-1
RL: PROC (Process)
(conversion of, to nitronaphthalenacetonitrile)

IT 72301-66-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and decyanation of)
IT 89278-18-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
IT 89278-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction and acetylation of)
IT 89278-00-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and C-methylation of)
IT 555-21-5P 610-66-2P 2945-08-6P 7599-05-5P 22908-29-8P
29704-38-9P 50712-63-5P 72301-65-6P 72301-67-8P 72301-68-9P
72301-69-0P 72301-70-3P 77158-79-3P 80199-01-5P 81310-40-9P
81327-28-8P 85397-18-8P 86981-07-9P 87081-90-1P 89277-98-5P
89277-99-6P 89278-01-3P 89278-02-4P 89278-03-5P 89278-04-6P
89278-05-7P 89278-06-8P 89278-09-1P 89278-10-4P 89278-11-5P
89278-12-6P 89278-13-7P 89278-14-8P 89278-17-1P 89278-19-3P
89278-20-6P *89278-21-7P* 89278-22-8P 89278-23-9P
89278-24-0P 89278-26-2P 89278-28-4P 89302-15-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 107-14-2 1617-17-0 3598-14-9 5219-61-4 13031-13-5 17277-58-6
27888-12-6 32121-27-0 33695-43-1 35928-65-5 61540-35-0
63006-68-8 70477-21-3 72301-64-5 89278-07-9 89278-08-0
89278-15-9 89278-16-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of nitroarene by)
IT 88-73-3 91-23-6 92-93-3 100-17-4 100-29-8 350-46-9 701-57-5
1493-27-2 3282-56-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, by nitrile anions)
IT 86-57-7 98-95-3, reactions 100-00-5 121-73-3 952-97-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, by nitrile or ester anions)
IT 1144-74-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(vicarious *nucleophilic* substitution of hydrogen of, ester anions)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L16 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
TI Reactions of organic anions. Part 163. Reactions of nitrobenzophenones with carbanions containing leaving groups. Vicarious *nucleophilic* substitution of hydrogen versus Darzens or the Wittig-Horner reactions
ST nitrobenzophenone reaction carbanion leaving group; *nucleophilic* substitution nitrobenzophenone; Darzens reaction nitrobenzophenone carbanion; Wittig Horner reaction nitrobenzophenone carbanion
IT Carbanions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzophenones)

IT Ring closure and formation
(Darzens, of nitrobenzophenones with carbanions containing leaving groups)
IT Wittig reaction
(Horner, of nitrobenzophenones with carbanions containing leaving groups)
IT Substitution reaction, *nucleophilic*
(vicarious, in carbanion reactions with nitrobenzophenones)
IT 79482-00-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination of)
IT 119657-21-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
IT 94514-35-9P 94514-36-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylation of)
IT 119657-16-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with di-Ph disulfide)
IT 119657-20-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with nitrobenzophenone)
IT 119657-22-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and substitution reactions of)
IT 41865-47-8P 69709-36-0P 94514-33-7P 94514-34-8P 94514-37-1P
119656-97-2P 119656-98-3P 119656-99-4P 119657-00-0P 119657-01-1P
119657-02-2P 119657-03-3P 119657-04-4P 119657-05-5P 119657-06-6P
119657-07-7P 119657-08-8P 119657-09-9P 119657-10-2P 119657-11-3P
119657-12-4P 119657-13-5P 119657-14-6P 119657-15-7P 119657-17-9P
119657-18-0P 119657-19-1P 119657-23-7P 119657-24-8P 119657-25-9P
119657-26-0P 119679-95-7P *119679-96-8P*
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 882-33-7, Diphenyl disulfide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzylphosphonate derivative)
IT 1144-74-7, p-Nitrobenzophenone 2243-79-0, o-Nitrobenzophenone
2243-80-3, m-Nitrobenzophenone
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carbanions containing leaving groups)
IT 107-14-2 3167-63-3 3598-14-9 5219-61-4 5533-31-3 7205-98-3
13557-25-0 15296-86-3 19169-90-5 31540-74-6 33695-43-1
38066-16-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzophenone)
IT 350-46-9, p-Fluoronitrobenzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenyl(tetrahydropyranoxy)acetonitrile)

ALL ANSWERS HAVE BEEN SCANNED

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     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1              STRUCTURE UPLOADED
L2            1 S L1 SSS SAM
L3           44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4           20 S L3
L5           13 S L4 AND PY<=2002
L6            0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7            3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
L8           50 S L3 SSS SAM
L9         2134 S L3 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:31:54 ON 30 APR 2008
L10        2134 S L9
L11        1571 S L10 AND AD<=20030221
L12         215 S L11 AND (PHOTO? OR CAGED OR PROTECT?)
L13           4 S L12 AND NUCLEO?
L14         128 S L11 AND PHOTO?
L15           1 S L14 AND NUCLEO?
L16           3 S L5 AND ?NUCLEO?

=> s l12 and (photo? OR caged) and ?nucleo?
       1572300 PHOTO?
          4566 CAGED
        903034 ?NUCLEO?
L17           2 L12 AND (PHOTO? OR CAGED) AND ?NUCLEO?

=> d l17 scan

L17   2 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
IC    ICM  C08F004-00
      ICS  C07F005-02; C08F002-46
CC    35-3 (Chemistry of Synthetic High Polymers)
      Section cross-reference(s): 37
TI    Sulfonium complex polymerization initiators, initiator compositions and
      polymerizable compositions containing the same, and their cured products
ST    sulfonium complex polymn initiator; hydroxyethyl sulfonium cation
      nonnucleophilic anion initiator; acid curable compd sulfonium
      complex initiator; epoxy acid curable sulfonium complex initiator;
      pentaerythritol triacrylate radical polymn initiator sulfonium; benzyl
      hydroxyethyl sulfonium tetrafluoroborate prepn initiator
IT    Photosensitizers (pharmaceutical)
         (compns. containing; sulfonium complex polymerization initiators, its
compns., and
         curable compns. thereof)
IT    Polymerization catalysts
         (radical; sulfonium complex polymerization initiators, its compns., and
         curable compns. thereof)
IT    Polymerization catalysts
         (sulfonium complex polymerization initiators, its compns., and curable
compns.
         thereof)
```

IT Sulfonium compounds
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(sulfonium complex polymerization initiators, its compns., and curable compns.
thereof)
IT Aminoplasts
RL: IMF (Industrial manufacture); PREP (Preparation)
(sulfonium complex polymerization initiators, its compns., and curable compns.
thereof)
IT 82752-41-8P, 2-Methyl-1,4,6-trioxaspiro(4,4)nonane homopolymer
RL: IMF (Industrial manufacture); PREP (Preparation)
(lsulfonium complex polymerization initiators, its compns., and curable compns. thereof)
IT 681-84-5, Tetramethoxysilane 2530-87-2, (γ-Chloropropyl)trimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(curing of, with acids; sulfonium complex polymerization initiators, its compns., and curable compns. thereof)
IT 94523-09-8P 201294-81-7P 201294-82-8P 201294-83-9P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(initiator intermediate; sulfonium complex polymerization initiators, its compns., and curable compns. thereof)
IT 70-11-1, Phenacyl bromide 100-39-0, Benzyl bromide 106-95-6, Allyl bromide, reactions 111-48-8, 2,2'-Thiodiethanol 2923-28-6, Silver trifluoromethylsulfonate 14104-20-2, Silver tetrafluoroborate 16836-95-6, Silver p-toluenesulfonate 16893-92-8, Potassium hexafluoroantimonate 17029-22-0, Potassium hexafluoroarsenate 17084-13-8, Potassium hexafluorophosphate 17201-43-3, p-Cyanobenzyl bromide 47855-94-7, Tetrakis(pentafluorophenyl) borate 65859-86-1, Lithium triphenylbutylborate
RL: RCT (Reactant); RACT (Reactant or reagent)
(initiator starting material; sulfonium complex polymerization initiators, its compns., and curable compns. thereof)
IT 65-61-2, Acridine Orange 120-12-7, Anthracene, uses 448-61-3, 2,4,6-Triphenylpyrylium tetrafluoroborate 492-22-8, Thioxanthone 781-43-1, 9,10-Dimethylanthracene 917-23-7, Tetraphenylporphyrin 1499-10-1, 9,10-Diphenylanthracene 1564-64-3, 9-Bromoanthracene 1582-78-1 2390-54-7, Setoflavine T 6285-94-5 6359-38-2, Benzoflavin 10075-85-1, 9,10-Bis(phenylethynyl)anthracene 11121-48-5, Rose Bengal 17372-87-1, Eosin Y 25470-94-4 38215-36-0, 3-(2-Benzothiazolyl)-7-(diethylamino)coumarin 63226-13-1, 3,3'-Carbonylbis [7-(diethylamino)coumarin] 80034-24-8, 1,8-Dimethoxy-9,10-bis(phenylethynyl) anthracene 200573-28-0
RL: MOA (Modifier or additive use); USES (Uses)
(sensitizer; sulfonium complex polymerization initiators, its compns., and curable compns. thereof)
IT 163958-27-8 201294-98-6 201295-00-3 201295-02-5 201295-03-6
201295-04-7 201295-05-8 201295-06-9 201295-07-0 201295-08-1
201295-09-2 201295-10-5 201295-11-6 201295-12-7 201295-13-8
201295-15-0 201295-18-3 201295-20-7 201295-22-9 201295-25-2
201295-27-4 201295-29-6 201295-30-9 201295-31-0 201295-32-1
201295-34-3 201295-35-4 201295-37-6 201295-41-2 201295-44-5
201295-47-8 201295-50-3 201295-53-6 201295-55-8 201295-56-9
201295-58-1 201295-60-5 201295-61-6 201295-62-7 201295-64-9

201295-65-0 201295-66-1 201295-67-2 201295-68-3 201295-71-8
201295-73-0 201295-75-2 201295-77-4 201295-79-6 201295-81-0
201295-83-2 201295-85-4 201295-87-6 201295-89-8 201295-91-2
201295-94-5 201747-62-8 201747-63-9 201747-64-0 201747-65-1
RL: CAT (Catalyst use); USES (Uses)
(sulfonium complex polymerization initiators, its compns., and curable compns.
thereof)
IT 201294-84-0P 201294-86-2P 201294-88-4P 201294-90-8P 201294-91-9P
201294-92-0P 201294-93-1P 201294-94-2P 201294-95-3P 201294-96-4P
201747-61-7P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(sulfonium complex polymerization initiators, its compns., and curable compns.
thereof)
IT 2694-54-4P 9003-08-1P, Cymel 300 9003-44-5P, Isobutyl vinyl ether homopolymer 9003-53-6P, Styrene homopolymer 9003-77-4P, 2-Ethylhexyl acrylate homopolymer 24979-97-3P 25053-15-0P, Diallyl phthalate homopolymer 25067-05-4P, Glycidyl methacrylate homopolymer 25067-59-8P, N-Vinylcarbazole homopolymer 25085-98-7P 25101-18-2P, Diethylene glycol dimethacrylate homopolymer 25190-06-1P 25719-51-1P, 2-Ethylhexyl methacrylate homopolymer 26022-14-0P, Poly(2-hydroxyethyl acrylate) 26426-04-0P, Trimethylolpropane trimethacrylate homopolymer 27775-58-2P, Pentaerythritol triacrylate homopolymer 27790-26-7P, Ethylene glycol divinyl ether homopolymer 27813-91-8P, 1,6-Hexanediol dimethacrylate homopolymer 28158-16-9P, Ethylene glycol diacrylate homopolymer 28728-97-4P, γ-Butyrolactone homopolymer, sru 29611-97-0P, 1,4-Butanediol diglycidyl ether homopolymer 31213-03-3P, γ-Butyrolactone homopolymer 36446-02-3P, Trimethylolpropane triacrylate homopolymer 42954-97-2P, 1,5,7,11-Tetraoxaspiro(5,5)undecane homopolymer 42993-70-4P, 1,4,6-Trioxaspiro(4,4)nonane homopolymer 57592-66-2P, Pentaerythritol tetraacrylate homopolymer 57592-67-3P, 1,6-Hexanediol diacrylate homopolymer 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer 70068-81-4P, Diallyl phthalate-trimethylolpropane trithioglycolate copolymer 80057-28-9P 94457-89-3P, Polypropylene glycol diacrylate homopolymer 108065-49-2P 140197-47-3P, Limonene monoepoxide homopolymer 194293-77-1P, 1,4,6-Trioxaspiro[4.5]decane homopolymer 194373-11-0P, Phenyloxetane homopolymer 201296-00-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(sulfonium complex polymerization initiators, its compns., and curable compns.
thereof)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L17 2 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM G03C001-015
ICS G03C001-035; G03C001-06; G03C001-08; G03C001-09; G03C001-34
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
TI Manufacture of silver halide *photographic* emulsion containing selenium-doped grains with high thermal stability
ST selenium compd dopant *photog* emulsion; selenocyanide dopant silver halide emulsion; thiazolium benzo additive *photog* material
IT *Photographic* emulsions

Photographic sensitizers
(manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 3425-46-5, Potassium selenocyanate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(dopant; manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 333-20-0, Potassium thiocyanate 20792-41-0, Tripotassium hexacyanoiridate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(manufacture of silver halide *photog.* emulsion containing selenium-doped grains with high thermal stability)
IT 2786-31-4 16407-55-9 95537-84-1 178156-23-5 178156-25-7
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(*nucleophilic* agent; manufacture of silver halide *photog* . emulsion containing selenium-doped grains with high thermal stability)

ALL ANSWERS HAVE BEEN SCANNED

=> 1d l14 scan
1D IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l14 scan

L14 128 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C07D311-92
ICS C07D405-06; C07C235-66; G02B005-23; C09K009-02
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27, 28, 38
TI *Photochromic* 3,3-bis(aryl)-5-((N-(un)substituted)amido)naphthopyrans, their preparation, compositions and polymer matrixes containing them and their use
ST naphthopyrancarboxamide *photochromic* dye prodn lens
IT Eyeglass lenses
(containing naphthopyrancarboxamide *photochromic* dyes)
IT Epoxy resins, preparation
Polyamides, preparation
Polycarbonates, preparation
Polyesters, preparation
Polyethers, preparation
Polysiloxanes, preparation
Polyureas
Polyurethanes, preparation
Polyvinyl butyrals
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(containing naphthopyrancarboxamide *photochromic* dyes for ophthalmics)
IT *Photochromic* materials
Photochromic materials

(dyes; production of naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT Dyes
Dyes
(*photochromic*; production of naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT Vinyl compounds, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers; containing naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT Polyurethanes, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thio-; containing naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT 9004-39-1P, Cellulose acetate propionate 103183-03-5P, Diacryl 121-polyethylene glycol dimethacrylate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(containing naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT 9003-53-6, Polystyrene 9004-35-7, Cellulose acetate 9012-09-3, Cellulose triacetate 25014-41-9, Polyacrylonitrile 75212-93-0, Diacryl 121 homopolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(containing naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT 297168-03-7P 297168-04-8P 297168-05-9P 297168-06-0P 297168-07-1P 297168-08-2P 297168-09-3P 297168-11-7P 297168-12-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; production of naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT 3555-85-9P, 2,2',4,4'-Tetramethoxybenzophenone 3651-62-5P 3692-67-9P 3923-52-2P, 1,1-Diphenyl-2-propyn-1-ol 4038-15-7P, 2,4,4'-Trimethoxybenzophenone 4038-17-9P 159595-96-7P 297168-15-1P 297168-17-3P 297168-18-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; production of naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

IT 74-86-2, Acetylene, reactions 77-78-1, Dimethyl sulfate 91-52-1, 2,4-Dimethoxybenzoic acid 92-70-6, 2-Hydroxy-3-naphthoic acid 93-07-2, 3,4-Dimethoxybenzoic acid 100-66-3, reactions 106-49-0, p-Methylaniline, reactions 110-91-8, Morpholine, reactions 119-61-9, Benzophenone, reactions 131-54-4, 2,2'-Dihydroxy-4,4'-dimethoxybenzophenone 3692-69-1 4096-20-2, N-Phenylpiperidine 6867-30-7, Lithium acetylide ethylenediamine complex 39828-35-8, 2,4-Dimethoxybenzoyl chloride 297168-13-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; production of naphthopyrancarboxamide *photochromic* dyes for ophthalmics)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> d his

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     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1             STRUCTURE UPLOADED
L2           1 S L1 SSS SAM
L3          44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4          20 S L3
L5          13 S L4 AND PY<=2002
L6           0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7           3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
L8          50 S L3 SSS SAM
L9        2134 S L3 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:31:54 ON 30 APR 2008
L10       2134 S L9
L11       1571 S L10 AND AD<=20030221
L12        215 S L11 AND (PHOTO? OR CAGED OR PROTECT?)
L13          4 S L12 AND NUCLEO?
L14        128 S L11 AND PHOTO?
L15          1 S L14 AND NUCLEO?
L16          3 S L5 AND ?NUCLEO?
L17          2 S L12 AND (PHOTO? OR CAGED) AND ?NUCLEO?

=> s l12 and (photo? OR caged) and ?ribo?
      1572300 PHOTO?
         4566 CAGED
        41352 ?RNASE
       647314 ?RIBO?
        41352 ?RNASE
        40311 RNASE
         2997 RNASES
        40961 RNASE
                (RNASE OR RNASES)
       665307 ?RIBO?
                (?RIBO? OR ?RNASE OR RNASE)
L18          0 L12 AND (PHOTO? OR CAGED) AND ?RIBO?

=> l14 and protect?
L14 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l14 and protect?
       679039 PROTECT?
L19          3 L14 AND PROTECT?

=> d l19 scan

L19   3 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
IC    ICM  C07C069-96
      ICS  G03F007-004
CC    74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
      Reprographic Processes)
```

Section cross-reference(s): 23
TI Compounds containing acid-cleavable *protective* groups and positive-working radiation-sensitive compositions prepared using these compounds
ST *photosensitive* compn *photoresist* elec circuit; butoxycarbonyloxyacetal *photosensitive* compn
IT *Photoimaging* compositions and processes
(butoxycarbonyloxyacetals for)
IT Electric circuits
(manufacture of, butoxycarbonyloxyacetals for)
IT Resists
(*photo*-, butoxycarbonyloxyacetals for)
IT 149925-10-0P 149925-13-3P 149925-15-5P 149997-42-2P 156281-11-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, *photosensitive* composition component from)
IT 149997-41-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and use of, a *photosensitive* composition component)
IT 149997-39-7P 149997-40-0P 149997-43-3P 156281-12-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and use of, as *photosensitive* composition component)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L19 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM G03C001-85
ICS G03C001-89; G03C001-815
INCL 430512000
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
TI Antistatic layer for *photographic* element
ST antistatic coating vanadium oxide *photog* film; UV absorber antistatic coating *photog* film
IT *Photographic* films
(antistatic layers containing vanadium pentoxide and aromatic ketone UV absorbers for)
IT 131-55-5 70356-09-1
RL: TEM (Technical or engineered material use); USES (Uses)
(UV absorber for antistatic layers for *photog.* films)
IT 1314-62-1, Vanadium pentoxide, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(*photog.* films with antistatic layers containing aromatic ketone UV absorbers and)
IT 9035-69-2, Cellulose diacetate
RL: TEM (Technical or engineered material use); USES (Uses)
(*photog.* films with antistatic layers containing vanadium pentoxide, aromatic ketone UV absorbers and)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L19 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C08G073-10
ICS C07C101-66
CC 42-10 (Coatings, Inks, and Related Products)
TI Polyimides and their use
ST polyimide relief printing; aminotetramethylbenzoyl phthalic acid polymer;

resist *photo* polyimide

IT *Photogravure*
(aromatic polyimide-polyketone resists for)

IT Coating materials
(aromatic polyimide-polyketones, manufacture of)

IT Ketones, preparation
RL: PREP (Preparation)
(polyimide-poly-, manufacture of, from (aminotetramethylbenzoyl)phthalic acid or anhydride, as resists structure)

IT Polyimides, preparation
RL: PREP (Preparation)
(polyketone-, manufacture of, from (aminotetramethylbenzoyl)phthalic acid or anhydride, as resists structure)

IT 95-93-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation of, with butyl(chloroformyl)phthalimide)

IT 552-30-7
RL: USES (Uses)
(condensation of, with butylamine)

IT 109-73-9, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with trimellitic anhydride)

IT 104559-56-0P 104559-57-1P 104559-58-2P 104570-36-7P
RL: PREP (Preparation)
(manufacture of, as coating and resist)

IT 101749-72-8P
RL: PREP (Preparation)
(preparation and condensation with durene)

IT 104462-39-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclodehydration of)

IT 104462-41-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenation of)

IT 104462-42-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 104462-40-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and nitridation of)

IT 104462-43-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

ALL ANSWERS HAVE BEEN SCANNED

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	49.08	304.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION

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CA SUBSCRIBER PRICE                                    -3.20      -3.20

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:40:29 ON 30 APR 2008

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:ssptajsl1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 10:57:59 ON 30 APR 2008
FILE 'CAPLUS' ENTERED AT 10:57:59 ON 30 APR 2008
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    49.08     304.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.20      -3.20

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     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1               STRUCTURE UPLOADED
L2             1 S L1 SSS SAM
L3            44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4            20 S L3
L5            13 S L4 AND PY<=2002
L6             0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7             3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
L8            50 S L3 SSS SAM
L9          2134 S L3 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:31:54 ON 30 APR 2008
L10         2134 S L9
L11         1571 S L10 AND AD<=20030221
L12          215 S L11 AND (PHOTO? OR CAGED OR PROTECT?)
L13            4 S L12 AND NUCLEO?
L14          128 S L11 AND PHOTO?
L15            1 S L14 AND NUCLEO?
L16            3 S L5 AND ?NUCLEO?
L17            2 S L12 AND (PHOTO? OR CAGED) AND ?NUCLEO?
L18            0 S L12 AND (PHOTO? OR CAGED) AND ?RIBO?
L19            3 S L14 AND PROTECT?
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=> s l12 and aroyl and nitro
          5112 AROYL
             2 AROYLS
          5112 AROYL
                 (AROYL OR AROYLS)
        168320 NITRO
            88 NITROS
        168378 NITRO
                 (NITRO OR NITROS)
L20           3 L12 AND AROYL AND NITRO

=> d l20

L20  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   1999:404947  CAPLUS <<LOGINID::20080430>>
DN   131:74982
TI   Naphthopyran photochromic dyes sensitive to pH
IN   Clarke, David A.; Heron, Bernard Mark; Gabbutt, Christopher David;
     Hepworth, John David; Partington, Steven Michael; Corns, Stephen Nigel
PA   James Robinson Limited, UK
SO   PCT Int. Appl., 37 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 9931081          A1     19990624    WO 1998-GB3681         19981210 <--
          W:  GB, JP, US
          RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
              PT, SE
PRAI GB 1997-26361       A      19971212
OS   MARPAT 131:74982
RE.CNT  14    THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d l20 scan

L20   3 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
IC   ICM  C07D311-92
     ICS  C07D311-78; C07D409-04; G02B005-23
CC   41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
     Sensitizers)
TI   Intensely coloring photochromic 2H-naphtho[1,2-b]pyrans and
     heterocyclic pyrans and their application
ST   photochromic naphthopyran dye
IT   Photochromic materials
       Photochromic materials
         (dyes; preparation of intensely coloring photochromic naphthopyran
         dyes)
IT   Dyes
     Dyes
        (photochromic; preparation of intensely coloring
        photochromic naphthopyran dyes)
IT   Eyeglass lenses
     Optical filters
```

Windows
(preparation of intensely coloring photochromic naphthopyran dyes for)

IT 214038-22-9P, Methyl 9-methoxy-2-(4-morpholinophenyl)-2-(2-thienyl)-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-23-0P, Methyl 9-methoxy-2-(4-morpholinophenyl)-2-phenyl-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-24-1P, Methyl 9-methoxy-2,2-bis(4-pyrrolidinophenyl)-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-25-2P, Methyl 9-methoxy-2,2-bis(4-piperidinophenyl)-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-26-3P, Methyl 9-methoxy-2-(4-methoxyphenyl)-2-(4-morpholinophenyl)-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-27-4P, Methyl 7,9-dichloro-2-(4-pyrrolidinophenyl)-2-phenyl-2H-naphtho[1,2-b]pyran-5-carboxylate 214038-28-5P, Methyl 7-fluoro-2-(4-piperidinophenyl)-2-phenyl-2H-naphtho[1,2-b]pyran-5-carboxylate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of intensely coloring photochromic naphthopyran dyes)

IT 127266-02-8P, Methyl 4-hydroxy-6-methoxy-2-naphthoate 151502-73-7P, Ethyl 4-hydroxy-6-methoxy-2-naphthoate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of intensely coloring photochromic naphthopyran dyes)

IT 123-11-5, p-Anisaldehyde, reactions 123-25-1, Diethyl succinate 127-09-3, Sodium acetate 214038-29-6, 1-(4-Morpholinophenyl)-1-(2-thienyl)-2-propyn-1-ol
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of intensely coloring photochromic naphthopyran dyes)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L20 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C07D311-92
ICS C07D405-04; C09K009-02
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27, 74
TI Naphthopyran photochromic dyes sensitive to pH
ST naphthopyran photochromic dye pH sensitive
IT Photochromic materials
Photochromic materials
(dyes; naphthopyran photochromic dyes sensitive to pH)

IT Marking
Printing (nonimpact)
(naphthopyran photochromic dyes sensitive to pH for labeling, printing, and marking)

IT Eyeglass lenses
(naphthopyran photochromic dyes sensitive to pH for ophthalmic elements)

IT Dyes
Dyes
(photochromic; naphthopyran photochromic dyes sensitive to pH)

IT 28656-26-0P 159595-90-1P 159595-92-3P 159595-94-5P 200062-63-1P 200888-30-8P 214115-70-5P 214746-72-2P 214746-73-3P 214746-75-5P 214746-76-6P 215949-11-4P 228415-20-1P 228415-21-2P 228415-22-3P

228415-24-5P 228415-26-7P 228415-27-8P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(naphthopyran *photochromic* dyes sensitive to pH)
IT 92-44-4, 2,3-Dihydroxynaphthalene 135-19-3, 2-Naphthol, reactions
3923-52-2 13632-62-7 101597-25-5 102164-16-9 159595-96-7
159596-01-7 159596-03-9 159596-05-1, 4-Morpholino-2-naphthol
194940-93-7 214115-76-1 214746-69-7 214746-70-0 214746-71-1
228415-19-8 228415-23-4 228415-25-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(naphthopyran *photochromic* dyes sensitive to pH)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L20 3 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C07D311-00
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
TI Neutral coloring *photochromic* 2H-naphtho[1,2-b]pyrans and heterocyclic pyrans and their use
ST *photochromic* naphthopyran dye prepn
IT *Photochromic* materials
Photochromic materials
(dyes; preparation of *photochromic* naphthopyran dyes)
IT Dyes
Dyes
(*photochromic*; preparation of *photochromic* naphthopyran dyes)
IT Eyeglass lenses
Optical filters
Windows
(preparation of *photochromic* naphthopyran dyes for)
IT 214115-70-5P, Methyl 2,2-bis(4-methoxyphenyl)-9-morpholino-2H-naphtho[1,2-b]pyran-5-carboxylate 214115-71-6P, Methyl 2,2-bis(4-methoxyphenyl)-9-pyrrolidino-2H-naphtho[1,2-b]pyran-5-carboxylate 214115-72-7P 214115-73-8P, Methyl 11,11-bis(4-methoxyphenyl)-2-methyl-11H-pyrano[2,3-b]carbazole-8-carboxylate 214115-74-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of *photochromic* naphthopyran dyes)
IT 214115-75-0P, Ethyl 4-acetoxy-6-morpholino-2-napthoate 214115-76-1P, Methyl 4-hydroxy-6-morpholino-2-napthoate 214115-77-2P, Ethyl 1-acetoxy-9-methylcarbazole-3-carboxylate 214115-78-3P, Methyl 1-hydroxydibenzothiophene-3-carboxylate 216171-89-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of *photochromic* naphthopyran dyes)
IT 123-25-1, Diethyl succinate 127-09-3, Sodium acetate 1204-86-0, 4-Morpholinobenzaldehyde 19012-03-4, 1-Methylindole-3-carboxaldehyde 69747-79-1, Ethyl 1-acetoxydibenzothiophene-3-carboxylate 101597-25-5, 1,1-Bis(4-methoxyphenyl)-2-propyn-1-ol
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of *photochromic* naphthopyran dyes)

ALL ANSWERS HAVE BEEN SCANNED

=> d his

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     (FILE 'HOME' ENTERED AT 09:28:28 ON 30 APR 2008)

     FILE 'REGISTRY' ENTERED AT 09:28:44 ON 30 APR 2008
L1                STRUCTURE UPLOADED
L2              1 S L1 SSS SAM
L3             44 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:29:18 ON 30 APR 2008
L4             20 S L3
L5             13 S L4 AND PY<=2002
L6              0 S L5 AND (PHOTO? OR CAGED OR PROTECT?)
L7              3 S L5 AND NUCLEO?

     FILE 'MARPAT' ENTERED AT 09:30:36 ON 30 APR 2008
L8             50 S L3 SSS SAM
L9           2134 S L3 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:31:54 ON 30 APR 2008
L10          2134 S L9
L11          1571 S L10 AND AD<=20030221
L12           215 S L11 AND (PHOTO? OR CAGED OR PROTECT?)
L13             4 S L12 AND NUCLEO?
L14           128 S L11 AND PHOTO?
L15             1 S L14 AND NUCLEO?
L16             3 S L5 AND ?NUCLEO?
L17             2 S L12 AND (PHOTO? OR CAGED) AND ?NUCLEO?
L18             0 S L12 AND (PHOTO? OR CAGED) AND ?RIBO?
L19             3 S L14 AND PROTECT?
L20             3 S L12 AND AROYL AND NITRO

=> s l11 and (photol? or caged)
        228975 PHOTOL?
          4566 CAGED
L21             4 L11 AND (PHOTOL? OR CAGED)

=> d l21 scan

L21   4 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
IC    ICM  G01N033-532
      ICS  G01N033-554; C07D307-82; C07D491-048
INCL 436079000
CC    9-5 (Biochemical Methods)
      Section cross-reference(s): 27
TI    Light-triggered indicators that memorize analyte concentrations
ST    light triggered indicator memorize analyte concn; calcium ion memory
      indicator
IT    Chromophores
         (carrying photolabile group and linked to analyte-binding
         compound; light-triggered indicators that memorize analyte concns.)
IT    Fluorometry
         (cytofluorometry; light-triggered indicators that memorize analyte
         concns.)
IT    Cytometry
         (fluorometric; light-triggered indicators that memorize analyte
         concns.)
IT    Antibodies
      RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
```

(labeled; light-triggered indicators that memorize analyte concns.)

IT Cell
Fluorescence microscopy
Fluorometry
Immunoassay
Indicators
Light
Test kits
(light-triggered indicators that memorize analyte concns.)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(light-triggered indicators that memorize analyte concns.)

IT 321939-01-9P
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(as calcium ion indicator; light-triggered indicators that memorize analyte concns.)

IT 321939-03-1D, compds.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as memory indicator for hydrogen ion; light-triggered indicators that memorize analyte concns.)

IT 321939-04-2D, compds.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as memory indicator for magnesium ion; light-triggered indicators that memorize analyte concns.)

IT 321939-05-3D, compds.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as memory indicator for sodium ion; light-triggered indicators that memorize analyte concns.)

IT 3483-12-3, Dithiothreitol
RL: NUU (Other use, unclassified); USES (Uses)
(in amine product detection; light-triggered indicators that memorize analyte concns.)

IT 12408-02-5, Hydrogen ion, analysis 14127-61-8, Calcium ion, analysis 17341-25-2, Sodium ion, analysis 22537-22-0, Magnesium ion, analysis
RL: ANT (Analyte); ANST (Analytical study)
(light-triggered indicators that memorize analyte concns.)

IT 321939-06-4D, derivs.
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); ANST (Analytical study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(light-triggered indicators that memorize analyte concns.)

IT 321939-02-0P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(light-triggered indicators that memorize analyte concns.)

IT 70-11-1, Phenacyl bromide 99-92-3 407-25-0, Trifluoroacetic anhydride 157306-63-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(light-triggered indicators that memorize analyte concns.)

IT 24568-13-6P 321938-99-2P 321939-00-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(light-triggered indicators that memorize analyte concns.)

IT 156897-49-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(light-triggered indicators that memorize analyte concns.)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L21 4 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C08G059-20
ICS C08F002-44; C08F002-50; C08F291-00; G02B001-04; G02B005-20; G02B005-22
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 73
TI Photocurable composition for manufacture of photocured film and color filter
ST photocurable polymer *photolithog* film color filter display; photopolymer polyfunctional alicyclic epoxy heat polymn crosslinker; benzophenone deriv photopolymn initiator photopolymer film
IT Epoxy resins, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(alicyclic, crosslinker; low-temperature photocurable composition containing heat-polymerization crosslinker for manufacture of photocured film and color filter)
IT Liquid crystal displays
(color; low-temperature photocurable composition containing heat-polymerization crosslinker
for manufacture of photocured film and color filter)
IT Heat treatment
Photolithography
(film or filter prepared by; low-temperature photocurable composition containing
heat-polymerization crosslinker for manufacture of photocured film and color filter)
IT Optical filters
Photoimaging materials
Plastic films
(low-temperature photocurable composition containing heat-polymerization crosslinker for
manufacture of photocured film and color filter)
IT Polymerization catalysts
(photopolymn.; low-temperature photocurable composition containing heat-polymerization
crosslinker for manufacture of photocured film and color filter)
IT Crosslinking
(thermal, film or filter prepared by; low-temperature photocurable composition
containing heat-polymerization crosslinker for manufacture of photocured film and color
filter)
IT Crosslinking agents
(thermal; low-temperature photocurable composition containing heat-polymerization crosslinker
for manufacture of photocured film and color filter)
IT 65697-21-4, Benzyl methacrylate-methacrylic acid copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(alkali-soluble, photocurable composition containing; low-temperature photocurable composition
containing heat-polymerization crosslinker for manufacture of photocured film and color

filter)
IT 244772-00-7, EHPE 3150
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinker; low-temperature photocurable composition containing heat-polymerization
crosslinker for manufacture of photocured film and color filter)
IT 25085-98-7, Celloxide 2021P
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(crosslinker; low-temperature photocurable composition containing heat-polymerization
crosslinker for manufacture of photocured film and color filter)
IT 29570-58-9, Dipentaerythritol hexaacrylate
RL: TEM (Technical or engineered material use); USES (Uses)
(photocurable composition containing; low-temperature photocurable composition containing
heat-polymerization crosslinker for manufacture of photocured film and color filter)
IT 77473-08-6, 3,3',4,4'-Tetra(tert-butylperoxycarbonyl)benzophenone
94852-43-4, 3,3',4,4'-Tetra(tert-amylperoxycarbonyl)benzophenone
94852-44-5 94852-45-6, 3,3',4,4'-Tetra(tert-octylperoxycarbonyl)benzophenone 94852-46-7, 3,3',4,4'-Tetra(cumylperoxycarbonyl)benzophenone
RL: CAT (Catalyst use); USES (Uses)
(photopolymn. initiator; low-temperature photocurable composition containing heat-polymerization crosslinker for manufacture of photocured film and color filter)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L21 4 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM C07F007-18
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 29
TI Silanes bearing amide groups and their thin films capable of converting surface properties by irradiation with low-energy light
ST photochem amide bond cleavage silane film; hydrophilization UV irradn amide silane film; anilinocarbonyl ethoxysilane film hydrophilization UV irradn
IT *Photolysis*
(photochem. bond cleavage, amide bond cleavage; manufacture of silanes bearing amide groups for thin films capable of converting surface properties by irradiation with low-energy light)
IT Bond cleavage
(photochem., amide bond cleavage; manufacture of silanes bearing amide groups for thin films capable of converting surface properties by irradiation with low-energy light)
IT 740847-20-5P 740847-21-6P 740847-22-7P 740847-23-8P 740847-24-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of silanes bearing amide groups for thin films capable of converting surface properties by irradiation with low-energy light)
IT 72816-81-0P, N-Decyl-2-nitroaniline 740847-17-0P 740847-18-1P 740847-19-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of silanes bearing amide groups for thin films capable of

converting surface properties by irradiation with low-energy light)
IT 88-74-4, 2-Nitroaniline 814-68-6, Acryloyl chloride 998-30-1, Triethoxysilane 2050-77-3, 1-Iododecane 39716-58-0, 4-Pentenoyl chloride 61761-29-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of silanes bearing amide groups for thin films capable of converting surface properties by irradiation with low-energy light)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

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IC ICM C07D493-04
ICS C07D311-86; C09B011-28
ICA C09K005-00; C09B067-22; C09B067-52; C08G085-00; C08G065-38; C08G061-12
ICI C07D493-04, C07D311-00
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 41, 51, 74
TI Preparation of xanthone derivatives.
ST xanthone prepn monomer; heat transfer fluid xanthone; pigment intermediate xanthone prepn; photoinitiator intermediate xanthone prepn
IT *Photolysis*
(photoinitiators, intermediates, xanthone derivs as)
IT Monomers
RL: SPN (Synthetic preparation); PREP (Preparation)
(xanthone derivs, preparation of)
IT Heat transfer
(agents, xanthone derivs.)
IT Pigments
(intermediates, xanthone derivs as)
IT 13340-61-9, 4,6-Bis(2,4-dichlorobenzoyl)-1,3-dihydroxybenzene 152383-56-7, 4,6-Bis(2-chlorobenzoyl)-1,3-dihydroxybenzene 152383-57-8 152383-58-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, to xanthone deriv)
IT 152383-50-1P 152383-51-2P 152383-52-3P 152383-53-4P 152383-54-5P 152383-55-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

ALL ANSWERS HAVE BEEN SCANNED

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	61.65	317.20
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-3.20	-3.20

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STN INTERNATIONAL SESSION SUSPENDED AT 11:01:30 ON 30 APR 2008